

IN THE CLAIMS:

Please cancel claims 18 and 54 without prejudice or disclaimer of the subject matter thereof, and amend the claims as follows.

1 --1 (Withdrawn). A temperature sensing device for measuring temperature of a fluid
2 at various locations along an intravenous fluid line extending between a fluid source and a
3 patient, said device comprising:
4 a housing member selectively securable to said fluid line at any of a plurality of fluid line
5 locations between said fluid source and said patient, wherein said housing member includes a
6 receptacle to receive and retain a portion of said fluid line corresponding to one of said plurality
7 of fluid line locations selected by an operator and to allow said fluid line to extend continuously
8 through said housing member, and wherein said plurality of fluid line locations includes at least
9 one proximal fluid line location toward said fluid source and at least one distal fluid line
10 location toward said patient; and
11 a temperature sensor disposed proximate said receptacle to measure temperature of fluid
12 within said retained fluid line portion and to generate a temperature signal indicating said
13 measured fluid temperature to facilitate display of said measured fluid temperature.

1 2 (Withdrawn). The sensing device of claim 1 further comprising:
2 a temperature monitor in communication with said temperature sensor to receive said
3 temperature signal and display said fluid temperature measured by said temperature sensor.

1 3 (Withdrawn). The temperature sensing device of claim 2, wherein said

2 temperature monitor includes a hand-held display device.

1 4 (Withdrawn). The temperature sensing device of claim 1, wherein said housing
2 member is slidable along said fluid line upon receiving and retaining said selected fluid line
3 portion to allow fluid temperature measurements at any of said plurality of fluid line locations.

1 5 (Withdrawn). The temperature sensing device of claim 1 further comprising:
2 a cover member connected and movable with respect to said housing member to control
3 access to said receptacle.

1 6 (Withdrawn). The temperature sensing device of claim 1, wherein said receptacle
2 includes a channel with a sensor receiving area that secures said temperature sensor within said
3 housing member and a tapered section configured to releasably engage said selected fluid line
4 portion received within said receptacle.

1 7 (Withdrawn). The temperature sensing device of claim 1 further comprising:
2 a plurality of resilient prongs extending from said housing member and configured to
3 receive and releasably retain said temperature sensor proximate said receptacle.

1 8 (Withdrawn). The temperature sensing device of claim 7, wherein each of said
2 prongs includes a transversely extending projection, each projection extending a selected
3 distance toward the other projection to engage and releasably retain said temperature sensor
4 between said prongs.

1 9 (Withdrawn). The temperature sensing device of claim 1, wherein said housing
2 member further includes a platform including an engaging surface to engage a body part of said
3 patient.

1 10 (Withdrawn). The temperature sensing device of claim 1, wherein said
2 temperature sensor includes a sensing tip disposed within said receptacle to pierce a wall of said
3 selected fluid line portion and directly measure temperature of fluid flowing through that portion.

1 11 (Withdrawn). The temperature sensing device of claim 10, wherein said housing
2 member further includes an upper member pivotally connected to a lower member, each of said
3 upper and lower members includes a groove disposed on an engaging surface, and said grooves
4 of said upper and lower members are aligned on said engaging surfaces to form said receptacle in
5 the form of a channel upon contact between said engaging surfaces.

1 12 (Withdrawn). The temperature sensing device of claim 11, wherein said engaging
2 surfaces include a locking mechanism to lock said upper member against said lower member.

1 13 (Withdrawn). The temperature sensing device of claim 1, wherein said housing
2 member includes a resilient member arranged in a spiral configuration with first and second
3 resilient member ends overlapping each other and separated by a gap.

1 14 (Currently amended). A temperature sensing device for measuring temperature of
2 a sterile medical solution ~~fluid flowing within an intravenous fluid line at selected locations~~
3 ~~along said fluid line, said device~~ comprising:

4 a medical solution container containing a sterile medical solution;
5 a fluid line coupled to said medical solution container to receive said sterile medical
6 solution;

7 a fitting disposed at a selected location along said fluid line and including:
8 first and second open ends each securable to selected portions of said fluid line;
9 a passage disposed within said fitting and extending between said first and second
10 open ends to permit ~~fluid~~ said sterile medical solution flowing within said fluid line to flow
11 through said fitting; ~~and~~

12 a connection port disposed on an exterior surface of said fitting and in fluid
13 communication with said passage; and

14 a thermally conductive receptacle including an open proximal end and a closed
15 distal end to directly contact and conduct thermal energy from said sterile medical solution
16 flowing within said passage, wherein said receptacle is secured within said connection port to
17 form a fluid tight seal to maintain said sterile medical solution within said passage; and

18 a temperature sensor ~~disposed~~ removably received within said receptacle open proximal
19 end ~~connection port~~ to measure temperature of ~~fluid~~ said sterile medical solution flowing through
20 said fitting and to generate an electrical temperature signal indicating said measured ~~fluid~~
21 solution temperature to facilitate electronic display of said measured ~~fluid~~ solution temperature.

1 15 (Currently amended). The temperature sensing device of claim 14 further

2 comprising:

3 a temperature monitor in communication with said temperature sensor to receive said
4 temperature signal and electronically display said ~~fluid~~ solution temperature measured by said
5 temperature sensor.

1 16 (Original). The temperature sensing device of claim 15, wherein said temperature
2 monitor includes a hand-held display device.

1 17 (Withdrawn). The temperature sensing device of claim 14, wherein said
2 temperature sensor directly contacts fluid flowing within said passage.

1 18 (Canceled).

1 19 (Currently amended). The temperature sensing device of claim ~~18~~ 14, wherein
2 said connection port extends from an outer surface of said fitting and said device further
3 comprises:

4 a securing member to secure said temperature sensor to said connection port, wherein
5 said securing member includes a recess defined therein and said temperature sensor is disposed
6 within said recess and extends to contact said receptacle when said securing member is secured
7 to said connection port.

1 20 (Withdrawn). The temperature sensing device of claim 19, wherein said securing
2 member and said connection port include a locking mechanism to releasably secure said securing

3 member to said connection port and to facilitate contact between said temperature sensor and
4 said receptacle.

1 21 (Withdrawn). The temperature sensing device of claim 20, wherein said locking
2 mechanism includes:

3 at least one projection removably attached to an outer surface of said connection port; and

4 at least one engagement member disposed on said securing member to engage a
5 corresponding projection;

6 wherein said at least one engagement member is configured to remove said
7 corresponding projection from said connection port in response to disengagement of said
8 securing member with said connection port to thereby prevent re-engagement of said connection
9 port with said securing member and re-use of said fitting.

1 22 (Withdrawn). The temperature sensing device of claim 14, wherein said
2 connection port includes a flexible membrane to seal an opening in said connection port from
3 said passage, and said temperature sensor includes a sensing tip configured to penetrate said
4 flexible membrane and directly measure temperature of fluid flowing within said passage.

1 23 - 40 (Canceled).

1 41 (Withdrawn). A temperature sensing device for measuring temperature of a fluid
2 at various locations along an intravenous fluid line extending between a fluid source and a
3 patient, said device comprising:

4 housing means for engaging said fluid line and selectively securable to said fluid line at
5 any of a plurality of fluid line locations between said fluid source and said patient, wherein said
6 housing means includes receiving means for receiving and retaining a portion of said fluid line
7 corresponding to one of said plurality of fluid line locations selected by an operator and for
8 allowing said fluid line to extend continuously through said housing means, and wherein said
9 plurality of fluid line locations includes at least one proximal fluid line location toward said fluid
10 source and at least one distal fluid line location toward said patient; and

11 temperature sensing means disposed proximate said receiving means for measuring
12 temperature of fluid within said retained fluid line portion and generating a temperature signal
13 indicating said measured fluid temperature to facilitate display of said measured fluid
14 temperature.

1 42 (Withdrawn). The temperature sensing device of claim 41 further comprising:
2 display means in communication with said temperature sensing means for receiving said
3 temperature signal and displaying said fluid temperature measured by said temperature sensing
4 means.

1 43 (Withdrawn). The temperature sensing device of claim 41, wherein said housing
2 means is slidable along said fluid line upon receiving and retaining said selected fluid line
3 portion to allow fluid temperature measurements at any of said plurality of fluid line locations.

1 44 (Withdrawn). The temperature sensing device of claim 41 further comprising:
2 cover means connected and movable with respect to said housing means for controlling

3 access to said receiving means.

1 45 (Withdrawn). The temperature sensing device of claim 41, wherein said device
2 further comprises:

3 resilient means extending from said housing means for receiving and releasably retaining
4 said temperature sensing means proximate said receiving means.

1 46 (Withdrawn). The temperature sensing device of claim 41, wherein said housing
2 means further includes patient means for engaging a body part of said patient.

1 47 (Withdrawn). The temperature sensing device of claim 41, wherein said
2 temperature sensing means includes line sensing means disposed within said receiving means for
3 piercing a wall of said selected fluid line portion and directly measuring temperature of fluid
4 flowing through that portion.

1 48 (Withdrawn). The temperature sensing device of claim 47, wherein said housing
2 means further includes an upper member pivotally connected to a lower member, each of said
3 upper and lower members includes a groove disposed on an engaging surface, and said grooves
4 of said upper and lower members are aligned on said engaging surfaces to form said receiving
5 means in the form of a channel upon contact between said engaging surfaces.

1 49 (Withdrawn). The temperature sensing device of claim 48, wherein said engaging
2 surfaces include locking means for locking said upper member against said lower member.

1 50 (Withdrawn). The temperature sensing device of claim 41, wherein said housing
2 means includes a resilient member arranged in a spiral configuration with first and second
3 resilient member ends overlapping each other and separated by a gap.

1 51 (Currently amended). A temperature sensing device for measuring temperature of
2 a sterile medical solution ~~fluid flowing within an intravenous fluid line at selected locations~~
3 ~~along said fluid line, said device~~ comprising:

4 a medical solution container including a sterile medical solution;

5 a fluid line coupled to said medical solution container to receive said sterile medical
6 solution;

7 connector means disposed at a selected location along said fluid line for permitting ~~fluid~~
8 solution flow therethrough, said connector means including:

9 first and second open ends each securable to selected portions of said fluid line;

10 flow means disposed within said connector means and extending between said
11 first and second open ends for permitting ~~fluid~~ said sterile medical solution flowing within said
12 fluid line to flow through said connector means; ~~and~~

13 fluid access means disposed on an exterior surface of said connector means and in
14 fluid communication with said flow means; and

15 thermal contact means including an open proximal end and a closed distal end for
16 directly contacting and conducting thermal energy from said sterile medical solution flowing
17 within said flow means, wherein said thermal contact means is secured within said fluid access
18 means and forms a fluid tight seal to maintain said sterile medical solution within said flow

19 means; and
20 temperature sensing means ~~disposed~~ removably received within said open
21 proximal end of said thermal contact means ~~fluid access means~~ for measuring temperature of
22 ~~fluid~~ said sterile medical solution flowing through said connector means and for generating an
23 electrical temperature signal indicating said measured ~~fluid~~ solution temperature to facilitate
24 electronic display of said measured ~~fluid~~ solution temperature.

1 52 (Currently amended). The temperature sensing device of claim 51 further
2 comprising:
3 display means in communication with said temperature sensing means for receiving said
4 temperature signal and electronically displaying said ~~fluid~~ solution temperature measured by said
5 temperature sensing means.

1 53 (Withdrawn). The temperature sensing device of claim 51, wherein said
2 temperature sensing means directly contacts fluid flowing within said flow means.

1 54 (Canceled).

1 55 (Currently amended). The temperature sensing device of claim ~~54~~ 51, wherein
2 said fluid access means extends from an outer surface of said connector means and said device
3 further comprises:
4 securing means for securing said temperature sensing means to said fluid access means,
5 wherein said securing means includes a recess defined therein and said temperature sensing

6 means is disposed within said recess and extends to contact said ~~cover~~ thermal contact means
7 when said securing means is secured to said fluid access means.

1 56 (Withdrawn). The temperature sensing device of claim 55, wherein said securing
2 means and said fluid access means include locking means for releasably securing said securing
3 means to said fluid access means and for facilitating contact between said temperature sensing
4 means and said cover means.

1 57 (Withdrawn). The temperature sensing device of claim 56, wherein said locking
2 means includes:

3 projection means removably attached to an outer surface of said fluid access means for
4 securing said securing means to said fluid access means; and

5 engagement means disposed on said securing means for engaging a corresponding
6 projection means for securing said securing means to said fluid access means;

7 wherein said engagement means removes said corresponding projection from said fluid
8 access means in response to disengagement of said securing means with said fluid access means
9 to thereby prevent re-engagement of said fluid access means with said securing means and re-use
10 of said connector means.

1 58 (Withdrawn). The temperature sensing device of claim 51, wherein said fluid
2 access means includes barrier means for sealing an opening in said fluid access means from said
3 flow means, and said temperature sensing means includes penetrating sensing means for
4 penetrating said barrier means and directly measuring temperature of fluid flowing within said

5 flow means.

1 59 (Currently amended). The temperature sensing device of claim 14 further
2 comprising:

3 a temperature monitor in communication with said temperature sensor to receive said
4 temperature signal and print said measured ~~fluid~~ solution temperature.

1 60 (Currently amended). The temperature sensing device of claim 14 further
2 comprising:

3 a temperature monitor in communication with said temperature sensor to receive said
4 temperature signal and record measured temperatures of said ~~fluid~~ medical solution.

1 61 (Currently amended). The temperature sensing device of claim 60, wherein said
2 temperature monitor includes a printer to print said recorded measured ~~fluid~~ solution
3 temperatures.

1 62 (Currently amended). The temperature sensing device of claim 51 further
2 comprising:

3 temperature printing means in communication with said temperature sensing means for
4 receiving said temperature signal and printing said measured ~~fluid~~ solution temperature.

1 63 (Currently amended). The temperature sensing device of claim 51 further

2 comprising:

3 temperature monitoring means in communication with said temperature sensing means
4 for receiving said temperature signal and recording measured temperatures of said ~~fluid~~ medical
5 solution.

1 64 (Currently amended). The temperature sensing device of claim 63, wherein said
2 temperature monitoring means includes printing means for printing said recorded measured ~~fluid~~
3 solution temperatures.--